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ABSTRACT

This follow-up study examined the role of affective variables in predicting academic achievement among middle school students. In a previous study, C. A. Sink, J. E. Barnett, and J. E. Hixon (1991) found moderate to strong correlations among self-perceived competence scores, teachers' ratings of student competence, and Grade 6 achievement. To extend these findings, parents' ratings of student academic competence and seventh-grade achievement test scores were collected from the same sample, 62 students (55 percent females) in a small midwestern town. In addition, 48 fathers and 54 mothers and 5 sixth-grade teachers and 5 seventh-grade teachers of the students participated in the study. Parents' and teachers' ratings yielded moderate correlations with academic achievement. Step-wise multiple regression analyses found teachers' perceptions and father's perceptions to be the strongest predictors of Grade 7 student achievement on three of the four subject areas tested. These results underscore the stability and the importance of affective variables in understanding and predicting middle school academic performance. Three tables present study findings. (SLD)

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Perceptions of Scholastic Competence and Their Relation to Middle School Achievement

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Running head: SCHOLASTIC COMPETENCE AND ACHIEVEMENT

Abstract

This follow-up study examined the role of affective variables in predicting academic achievement among middle-school students. In a previous study, Sink, Barnett, and Hixon (1991) found moderate to strong correlations among self-perceived competence scores, teachers' ratings of student competence, and Grade 6 achievement. To extend these findings, Grade 7 teacher ratings, parents' ratings of student academic competence, and seventh grade achievement test scores, were collected from the same sample. Similar positive correlations were found between the students' academic self-concept and achievement in Grades 6 and 7. Parents' and teachers' ratings yielded moderate correlations with academic achievement. Step-wise multiple regression analyses found teachers' perceptions and fathers' perceptions to be the strongest predictors of Grade 7 student achievement on three of the four subject areas tested. These results underscore the stability and the importance of affective variables in understanding and predicting middle-school academic performance.

Perceptions of Scholastic Competence

and Their Relationship to Middle School Achievement

Middle-school students' judgments of their own scholastic competence are significantly correlated with academic achievement (e.g., Hansford & Hattie, 1982; Harter, 1985). The importance of these self-perceptions was illustrated in a recent study of sixth grade students by Sink, Barnett, and Hixon (1991), who found that while cognitive variables such as planning and self-assessment were correlated significantly with achievement, student and teacher perceptions of academic competence were the best predictors of achievement.

The present investigation extends the Sink et al. (1991) study by examining the relationship between self-perceived scholastic competence and academic performance over time. Longitudinal data from high school students show stable correlations between academic self-concept and achievement measures (Marsh, 1990).

The correlations among parental and teacher ratings of academic competence, student perceptions of scholastic competence, and achievement were also tested. A child's developing sense of self, both as a student and more globally, as a person, is influenced by the perceptions and support of significant others (Goodenow,

1992). While peers have been linked to global self-concept (Harter, 1989), the perceptions of parents (Felson, 1989) and of teachers (Jussim, 1986) appear to play a more crucial role in the formation of academic self-concepts.

Finally, the strength of these relationships was tested via step-wise multiple regression procedures. A combination of self-perceptions, teacher perceptions, and parental perceptions were hypothesized to account for a significant portion of variance in four measures of academic performance.

Method

Subjects

The subjects included 62 (55% female) 6th-graders from a small midwestern university town of predominately white (96%) lower-middle-class families. The mean age of the sample was 11.6 (*SD* = .61). In addition, the students' parents (fathers, *N* = 48; mothers, *N* = 54) and their sixth (*N* = 5) and seventh (*N* = 5) grade teachers (female) participated in the study.

Instrumentation and Procedure

To estimate the subjects' academic self-perceptions, they were administered the Self-perception Profile for Children (Harter, 1985) late in the sixth grade. At the same time, the children's

home-room teachers completed the Teacher's Rating Scale of Actual Behavior (see Harter, 1985). Early the following school year, the parents and seventh grade teachers completed the adapted version of Harter's scale. Missouri Mastery and Achievement Test (MMAT; Center for Educational Assessment at the University of Missouri--Columbia, 1990) subtest scores (mathematics, reading, science, and social studies) were collected from the students' cumulative record. The descriptive statistics on these measures are shown in Table 1.

Results and Discussion

There was a significant difference between ratings of scholastic competence ($F(4, 283) = 3.06$, $p < .02$). Parental ratings of their children's academic competence were significantly higher than the children's scholastic competence scores. Significant Pearson correlations (see Table 2) emerged among the academic self-concept and sixth and seventh grade achievement scores, ranging from .42 to .77. Moderate correlations were also found among the scholastic competence ratings for students, teachers and parents. Fathers' and mothers' ratings, and sixth and seventh grade teachers' perceived competence scores were significantly correlated, $r = .82$ and $r = .49$, respectively. The findings for the

step-wise multiple regression analyses are shown in Table 3.

Although correlational in nature, the strength of the relationships and their stability over time lend further credence to models of school learning which stress the importance of establishing positive self-images of students as learners as a route to future achievement (Goodenow, 1992). The significant correlations among parent, teacher, and student perceptions of competence are consistent with the social interactionalist view, where individuals construct their self-images based upon feedback from significant others. Attempts to build positive self-perceptions should carefully consider the social context of achievement, especially the perceptions and support received from parents and teachers. The results of the multiple regression analyses underscore the importance of parent and teacher perceptions. In three of four domains, the sixth grade homeroom teachers' and fathers' ratings of scholastic competence were the two best predictors of seventh grade achievement.

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TABLE 1

DESCRIPTIVE STATISTICS FOR ACADEMIC SELF-CONCEPT AND ACHIEVEMENT VARIABLES

Variables	*n*	*M*	*SD*
Academic Self-concept			
Students' Perceptions of Scholastic Competence	62	2.92	.61
Teachers' (Grade 6) Perceptions of Scholastic Competence	62	3.12	.76
Teachers' (Grade 7) Perceptions of Scholastic Competence	58	3.15	.77
Mothers' Perceptions of Scholastic Competence	54	3.32	.74
Fathers' Perceptions of Scholastic Competence	48	3.33	.69
Achievement Measures			
Mathematics MMAT Subtest (Grade 6)	62	384.35	84.21
Mathematics MMAT Subtest (Grade 7)	58	366.52	81.70
Reading MMAT Subtest (Grade 6)	62	314.03	65.52
Reading MMAT Subtest (Grade 7)	58	339.67	65.99
Science MMAT Subtest (Grade 6)	62	418.77	87.37
Science MMAT Subtest (Grade 7)	58	335.88	61.29
Social Studies MMAT Subtest (Grade 6)	62	353.66	81.20
Social Studies MMAT Subtest (Grade 7)	58	364.10	76.35

Note.—MMAT = Missouri Mastery and Achievement Test.

TABLE 2

PEARSON CORRELATIONS* AMONG SCHOLASTIC COMPETENCE AND ACHIEVEMENT VARIABLES

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Students' Perceptions of Scholastic Competence		.44	.30	.52	.66	.60	.59	.44	.45	.46	.42	.54	.53
2. Grade 6 Teachers' Perceptions of Scholastic Competence			.49	.56	.64	.64	.65	.59	.62	.50	.51	.54	.60
3. Grade 7 Teachers' Perceptions of Scholastic Competence				.57	.53	.55	.59	.58	.47	.44	.52	.43	.51
4. Mothers' Perceptions of Scholastic Competence					.82	.71	.64	.70	.66	.54	.47	.52	.58
5. Fathers' Perceptions of Scholastic Competence						.77	.71	.57	.69	.52	.48	.58	.64
6. Mathematics MMAT (Grade 6)							.86	.76	.79	.76	.63	.72	.70
7. Mathematics MMAT (Grade 7)								.77	.80	.80	.73	.78	.80
8. Reading MMAT (Grade 6)									.81	.72	.61	.70	.76
9. Reading MMAT (Grade 7)										.79	.73	.77	.80
10. Science MMAT (Grade 6)											.80	.79	.77
11. Science MMAT (Grade 7)												.83	.76
12. Social Studies MMAT (Grade 6)													.85
13. Social Studies MMAT (Grade 7)													

Note.—MMAT = Missouri Mastery and Achievement Test.
*Correlations are significant $p < .05$.

TABLE 3

SUMMARY OF STEP-WISE MULTIPLE REGRESSION ANALYSES[a]

Variable	*b*	SE_b	Beta	*F*	*df*	R^2
1. Criterion = Missouri Mastery and Achievement Test, Mathematics–Predictors = Students' Perceptions of Scholastic Competence, 6th Grade Teachers' Perceptions of Scholastic Competence, 7th Grade Teachers' Perceptions of Scholastic Competence, Fathers' Perceptions of Scholastic Competence, Mothers' Perceptions of Scholastic Competence, and Mothers' Level of Education.						
6th Grade Teachers' Perceptions of Scholastic Competence (R = .72)	93.78	14.21	.87	8.33†	1,41	.52
Fathers' Perceptions of Scholastic Competence (R = .77)	44.33	15.76	.37	7.91†	2,40	.60
2. Criterion = Missouri Mastery and Achievement Test, Reading						
Fathers' Perceptions of Scholastic Competence (R = .70)	45.64	16.03	.48	8.10†	1,41	.49
6th Grade Teachers' Perceptions of Scholastic Competence (R = .74)	30.84	13.27	.36	5.40*	2,40	.55
3. Criterion = Missouri Mastery and Achievement Test, Science						
7th Grade Teachers' Perceptions of Scholastic Competence (R = .58)	43.44	10.92	.55	15.80†	1,41	.34
Students' Perceptions of Scholastic Competence (R = .63)	28.76	14.46	.28	3.96*	2,40	.40
4. Criterion = Missouri Mastery and Achievement Test, Social Studies						
Fathers' Perceptions of Scholastic Competence (R = .66)	47.96	19.94	.43	5.78*	1,41	.43
6th Grade Teachers' Perceptions of Scholastic Competence (R = .70)	34.88	16.50	.34	4.47*	2,40	.49

[a]Achievement test scores for early 7th grade.

*$p < .05$. †$p < .01$.